

Patent Claims:

1. Method for the arrangement of contact-making elements of components of an integrated circuit, at
5 least one part of at least one component having a larger extent along a first course direction than along a second course direction, which is orthogonal to the first course direction, at least one contact-making
10 element assigned to a component having, in cross section, a larger extent along a third course direction than along a fourth course direction, which is orthogonal to the third course direction,
in which the contact-making element is arranged with respect to the assigned component in such a way that
15 the first course direction of the component essentially runs parallel to the third course direction of the contact-making element,
firstly a first layout being determined under the assumption of contact-making elements with a square
20 cross section,
a second layout with contact-making elements with a rectangular cross section being determined on the basis of the first layout.
- 25 2. Method according to Claim 1,
in which the contact-making element is furthermore arranged on the basis of the surroundings of the assigned component in the integrated circuit.
- 30 3. Method according to Claim 1 or 2,
in which the contact-making element is arranged on the basis of the criterion that the area requirement of the integrated circuit is reduced.
- 35 4. Method according to one of Claims 1 to 3,
in which the contact-making element is arranged on the basis of the criterion that the distance between adjacent components is reduced.

5. Method according to one of Claims 1 to 4, in which the contact-making element is arranged on the basis of the criterion that an undesirable influencing between adjacent components and/or between adjacent contact-making elements of a component is avoided.
6. Method according to one of Claims 1 to 5, in which the contact-making element is arranged on the basis of the criterion that the speed of the integrated circuit is increased.
7. Method according to one of Claims 1 to 6, in which the lengths of the rectangle sides of the contact-making element with a rectangular cross-sectional area are determined in such a way that the area requirement of the integrated circuit and/or the distance between adjacent components is/are reduced.
8. Method according to one of Claims 1 to 7, in which the integrated circuit has at least two different types of components.
9. Method according to one of Claims 1 to 8, in which the integrated circuit contains a logic circuit or is a logic circuit.
10. Method according to one of Claims 1 to 8, in which
- at least one of the components is a field-effect transistor;
 - contact-making elements for making contact with the source/drain regions of the at least one field-effect transistor are provided;
 - the shorter rectangle side of the contact-making element is arranged in a manner essentially

running parallel to the connecting axis of the two source/drain regions.

11. Method according to one of Claims 1 to 8,
5 in which
- at least one of the components is a field-effect transistor;
 - contact-making elements for making contact with the source/drain regions of the at least one
10 field-effect transistor are provided;
 - the longer rectangle side of the contact-making element is arranged in a manner essentially running parallel to a course direction of a gate line.
- 15
12. Method according to one of Claims 1 to 11,
in which, for each of the components,
- the geometrical arrangement of the centroid of each of the associated contact-making elements is
20 determined;
 - the two side lengths of each of the associated contact-making elements with a rectangular cross section are determined.
- 25
13. Apparatus for the arrangement of contact-making elements of components of an integrated circuit, at least one part of at least one component having a larger extent along a first course direction than along a second course direction, which is orthogonal to the
30 first course direction, at least one contact-making element assigned to a component having, in cross section, a larger extent along a third course direction than along a fourth course direction, which is orthogonal to the third course direction,
- 35 having a processor which is set up in such a way that the following method steps can be carried out:
the contact-making element is arranged with respect to the assigned component in such a way that the first

course direction of the component essentially runs parallel to the third course direction of the contact-making element,

5 firstly a first layout being determined under the assumption of contact-making elements with a square cross section,

a second layout with contact-making elements with a rectangular cross section being determined on the basis of the first layout.

10

14. Computer-readable storage medium, in which is stored a program for the arrangement of contact-making elements of components of an integrated circuit, at least one part of at least one component having a
15 larger extent along a first course direction than along a second course direction, which is orthogonal to the first course direction, at least one contact-making element assigned to a component having, in cross section, a larger extent along a third course direction
20 than along a fourth course direction, which is orthogonal to the third course direction, which program, if it is executed by a processor, has the following method steps:

25 the contact-making element is arranged with respect to the assigned component in such a way that the first course direction of the component essentially runs parallel to the third course direction of the contact-making element,

30 firstly a first layout being determined under the assumption of contact-making elements with a square cross section,

a second layout with contact-making elements with a rectangular cross section being determined on the basis of the first layout.

35

15. Program element for the arrangement of contact-making elements of components of an integrated circuit, at least one part of at least one component

BEST AVAILABLE COPY

having a larger extent along a first course direction than along a second course direction, which is orthogonal to the first course direction, at least one contact-making element assigned to a component having,

5 in cross section, a larger extent along a third course direction than along a fourth course direction, which is orthogonal to the third course direction, which program element, if it is executed by a processor, has the following method steps:

10 the contact-making element is arranged with respect to the assigned component in such a way that the first course direction of the component essentially runs parallel to the third course direction of the contact-making element,

15 firstly a first layout being determined under the assumption of contact-making elements with a square cross section,

a second layout with contact-making elements with a rectangular cross section being determined on the basis

20 of the first layout.